REMARKS

Attached hereto is a fee for one (1) independent claim in excess of three.

Claims 1-16 are pending in the application. This Amendment currently amends claims 1-4 and adds claims 5-16. No new matter is added to currently amended claims 1-4 or to new claims 5-16. Claims 1-4 are currently amended to merely clarify the subject matter of the claims and in no way narrow the scope of the claims in order to overcome the prior art or for any other statutory purpose of patentability.

Notwithstanding any claim amendments of the present Amendment or those amendments that may be made later during prosecution, Applicant's intent is to encompass equivalents of all claim elements. Reconsideration in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1 and 4 stand rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 4,685,125 to Zave et al. (hereinafter, Zave) in view of U.S. Patent No. 5,437,032 to Wolf et al. (hereinafter, Wolf). Claim 2 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zave in view of Wolf in further view of U.S. Patent No. 6,243,788 to Franke et al. (hereinafter, Franke). Claim 3 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Zave, in view of Wolf, in further view of Franke, and in further view of U.S. Patent No. 5,337,258 to Dennis.

These rejections are respectfully traversed in view of the following discussion.

I. THE CLAIMED INVENTION

The claimed invention, as described in claim 1, is directed to a task system that comprises a storage for storing one or more event identifiers for an event of a plurality of events, a task control device for creating a task based on said event, and a task processing device for executing a plurality of tasks, whereupon completing a first task of said plurality of tasks, said task processing device initiates a search for another identifier, and if said another identifier is the same as said one or more event identifiers corresponding to said first task, then processes a second task, which is the same as said first task.

An aspect of the present invention is to speed up the task processing by controlling the overhead generation for task switching in the case of processing a large number of

identical tasks.

II. THE PRIOR ART REJECTIONS

A. The Zave Reference

It is assumed in the flow of execution of an application process as shown in Figs. 14-17 of Zave that the user has specified a particular program image that she desires to run and has also specified a set of arguments for the program (col. 20, lines 8-11 and 17-19). The request to run the program has been forwarded by the system to <u>the application control process</u> (ACP) (Fig. 9) <u>which has determined that a process embodying the program in question does not exist in the node processor at this time</u> (col. 20, lines 20-25).

<u>The ACP process has generated a so-called process creation string</u> and a process creation service within the shared image, invoked by the ACP program code, has placed the process creation string in a VMS mailbox where it can be accessed by the new process once it begins to execute (col. 20, lines 31-36). <u>The process creation string includes a number of data items that the new process will need,</u> including an identification of the program, i.e., process-specific, image specified by the user; customer account and service ID numbers associated with the user; an indication that the process to be created is an application process; and a pointer to a data structure in the database referred to as the program image profile (col. 20, lines 36-44).

B. The Wolf Reference

Wolf discloses that tasks 204 for job j are indexed from $i=1$ to $T(j)$ (col. 4, lines 42-43). <u>Task indices i</u> are assigned statically on the basis of decreasing estimated task completion time, <u>so that task 1 of a particular job is the task with the longest estimated completion time</u> (col. 4, lines 43-47).

<u>Tasks 204 are independent</u> in the sense that there is no precedence between them (col. 5, lines 4-5). These tasks are under control of the scheduler and they are assumed to have estimated execution times $t(j,1)$, $t(j,2)$, ... $t(j,T)$; however, these estimates are assumed imperfect (col. 5, lines 5-8).

Wolf also discloses that if a sum of current accesses $n(d)$ to a particular storage device d and a number of accesses $U(i,j,d)$ made to the storage device d by task i of job j is greater

than a maximum allowable access level N(d), the routine enters another iteration loop, which it repeats for each task ii of job j (col. 13, lines 12-17). " If task ii has already been completed by processor p, then the routine sets VALUE equal to 1 to indicate that task i has an affinity for processor complex p ... this is truly a case of affinity for a particular processor complex p as distinguished from a affinity for the system 100 as a whole."

Claim 1 recites at least the features of "whereupon completing a first task of said plurality of tasks, said task processing device initiates a search for another identifier, and if said another identifier is the same as said one or more event identifiers corresponding to said first task, then processes a second task, which is the same as said first task."

Zave discloses system software, which upon determining that a user-requested application process is not present in a processor node, accesses a process creation service to load the user-requested application process into the processor node. Therefore, Zave is irrelevant to the claimed invention.

In contrast, the claimed invention, upon completing a first task and finding another event identifier corresponding to the first task, then processes a second task, which is the same as the first task. Zave does not teach or suggest searching for a task resident in the node processor, which may then be processed again. In fact, Zave assumes that the user-requested application program, presumably corresponding to the claimed invention's first task, is not present in the node processor, presumably corresponding to the claimed invention's task processing device.

Therefore, Zave does not teach or suggest "whereupon completing a first task of said plurality of tasks, said task processing device initiates a search for another identifier, and if said another identifier is the same as said one or more event identifiers corresponding said first task, then processes a second task, which is the same as said first task," as recited in claim 1.

Wolf does not cure the deficiencies of Zave. Wolf discloses a task scheduler for a multiprocessor system that schedules a task i and a task ii to a job j. Task i and a task ii are not the same task; they have different estimated times to completion.

In contrast, the claimed invention, upon completing a first task and finding another event identifier corresponding to the first task, then processes a second task, which is the same as the first task. Wolf does not teach or suggest processing a task again, when an event

identifier, corresponding to the task, is identified in an event storing unit, as in the claimed invention. The Office Action's assertion that task *i* is deemed to have an affinity for the processor complex *p* since another task *ii* from the same job has completed execution on that complex, does not account for the fact that <u>task *i* and task *ii* are different tasks</u>, having different estimated times of completion and being performed on different processors. Therefore, the processing of tasks *i* and *ii* in Wolf is not the same as sequentially processing the same task, as in the claimed invention.

Therefore, Wolf does not teach or suggest "whereupon completing a first task of said plurality of tasks, said task processing device initiates a search for another identifier, and<u>if said another identifier is the same as said one or more event identifiers corresponding said first task, then processes a second task, which is the same as said first task,</u>" as recited in claim 1.

For at least the reasons outlined above, Applicant respectfully submits that Zave and Wolf, either individually or in combination, do not teach or suggest every feature of claim 1. Accordingly, Zave and Wolf, either individually or in combination, do not render obvious the subject matter of claim 1 and claim 4, which depends from claim 1. Withdrawal of the rejection of claims 1 and 4 under 35 U.S.C. §103(a) as unpatentable over Zave in view of Wolf is respectfully solicited.

C. The Franke Reference

Franke discloses a multiprocessor system that interposes a cache memory between its processors and their associated memory (col. 3, lines 45-51). When a current thread, executing its instruction stream on a CPU, accesses the content of memory location A (M[A]), the CPU issues these requests toward its associated cache 21 through the CPU-Cache-Interface 28 (col. 3, line 67 to col. 4, line 4). The task of the cache is then to (a) identify whether the M[A] is already in the cache's storage and then return the data to the CPU or (b) whether the M[A] has to be fetched from main memory before performing the task (col. 4, lines 4-9).

Similar to Zave, Franke is irrelevant to the claimed invention. Nowhere does Franke teach or suggest "whereupon completing a first task of said plurality of tasks, said task processing device initiates a search for another identifier, and<u> if said another identifier is the</u>

same as said one or more event identifiers corresponding said first task, then processes a second task, which is the same as said first task," as recited in claim 1.

For at least the reasons outlined above, Applicant respectfully submits that Zave, Wolf and Franke, either individually or in combination, do not teach or suggest every feature of claim 1. Accordingly, Zave, Wolf and Franke, either individually or in combination, do not render obvious the subject matter of claim 1 and claim 2, which depends from claim 1. Withdrawal of the rejection of claim 2 under 35 U.S.C. §103(a) as unpatentable over Zave in view of Wolf and further in view of Franke is respectfully solicited.

D. The Dennis Reference

Dennis discloses a computer-printer system 200 in which a host resource store 210 is loaded only a single time with the resources required to print the document, while resources may be downloaded and released from the printer resource store 220 many times during the course of printing the document (col. 12, lines 54-58). In order to determine the most efficient use of resources, the computer-printer system 200 examines the entire document to determine how to allocate resources in the most efficient manner (col. 12, lines 58-62).

Contrary to the present invention, which processes tasks sequentially and examines whether an associated resource is to be released upon completion of each task, Dennis examines the entire document in order to allocate resources.

Dennis does not cure the deficiencies of Zave, Wolf and Franke. Nowhere does Dennis teach or suggest "whereupon completing a first task of said plurality of tasks, said task processing device initiates a search for another identifier, and if said another identifier is the same as said one or more event identifiers corresponding said first task, then processes a second task, which is the same as said first task," as recited in claim 1.

For at least the reasons outlined above, Applicant respectfully submits that Zave, Wolf, Franke and Dennis, either individually or in combination, do not teach or suggest every feature of claim 1. Accordingly, Zave, Wolf, Franke and Dennis, either individually or in combination, do not render obvious the subject matter of claim 1 and claim 3, which depends from claim 1. Withdrawal of the rejection of claim 3 under 35 U.S.C. §103(a) as unpatentable over Zave, in view of Wolf, further in view of Franke, and further in view of Dennis is respectfully solicited.

III. CONCLUSION

Applicant respectfully traverses the Examiner's failure to consider Document Number 2561801, which was provided on the form PTO-1449 filed on June, 7, 2000.

In view of the foregoing, Applicant submits that claims 1-16, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

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